

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Cancelled).

Claim 24. (Currently Amended): An information processing apparatus comprising:
encoding means for encoding an input stream so as to include, among a base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream, at least the base stream and ~~the~~ a first extension stream;

adding means for adding transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream, which are encoded by the encoding means, to the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream; and

packetizing means for packetizing the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, to which the transport priority information is added by the adding means, into TS packets,

wherein the encoding means encodes the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the input stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 25. (Currently Amended): An information processing method implemented using an information processing apparatus having at least encoding and packetizing parts, comprising:

an encoding step of encoding, using the information processing apparatus, an input stream so as to include, among a base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream, at least the base stream and ~~the~~ a first extension stream;

an adding step of adding transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream, which are encoded by the encoding step, to the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream; and

a packetizing step of packetizing, using the information processing apparatus, the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, to which the transport priority information is added by the adding step, into TS packets,

wherein the encoding step encodes the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the input stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 26. (Currently Amended): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an encoding step of encoding an input stream so as to include, among a base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream, at least the base stream and ~~the~~ a first extension stream;

an adding step of adding transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension ~~streams~~

stream, which are encoded by the encoding step, to the base stream and the ~~first to n-th~~ at least one extension streams stream; and

a packetizing step of packetizing the base stream and the ~~first to n-th~~ at least one extension streams stream, to which the transport priority information is added by the adding step, into TS packets,

wherein the encoding step encodes the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the input stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 27. (Currently Amended): An information processing apparatus comprising:

input means for inputting a stream including TS packets forming a base stream, TS packets forming ~~each of first to n-th~~ at least one extension streams stream having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension streams stream;

determining means for referring to the transport priority information stored in the TS packets input by the input means and for determining the type of processable stream;

selecting means for selecting, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining means to be processable; and

decoding means for decoding the TS packets selected by the selecting means,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the stream, are encoded so that the TS

packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 28. (Previously Presented): The information processing apparatus according to claim 27, further comprising:

buffering means for buffering, with respect to the transport priority information, the TS packets selected by the selecting means.

Claim 29. (Currently Amended): An information processing method implemented using an information processing apparatus having at least a decoding part, comprising:

an input step of inputting a stream including TS packets forming a base stream, TS packets forming each of ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream;

a determining step of referring to the transport priority information stored in the TS packets input by the input step and determining the type of processable stream;

a selecting step of selecting, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining step to be processable; and

a decoding step of decoding, using the information processing apparatus, the TS packets selected by processing in the selecting step,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the stream, are encoded so that the TS

packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 30. (Currently Amended): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an input step of inputting a stream including TS packets forming a base stream, TS packets forming each of ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream;

a determining step of referring to the transport priority information stored in the TS packets input by the input step and determining the type of processable stream;

a selecting step of selecting, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining step to be processable; and

a decoding step of decoding the TS packets selected by processing in the selecting step,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 31. (Currently Amended): A non-transitory computer readable medium having stored thereon a data structure of an entire stream to be played back by a computer, the entire stream including a base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream,

wherein the entire stream includes:

TS packets forming the base stream,

TS packets forming each of the ~~first to n-th~~ at least one extension stream, and

a header of each of the TS packets forming the base stream and the TS packets forming each of the ~~first to n-th~~ at least one extension ~~streams~~ stream includes an ID identifying the TS packet, and

wherein the TS packets each include transport priority information that indicates priority and respectively distinguishes the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 32. (Currently Amended): The non-transitory computer readable medium according to claim 31, wherein

the TS packets forming the base stream and the TS packets forming each of the ~~first to n-th~~ at least one extension ~~streams~~ stream, which are included in the entire stream, are arranged in sequence of the TS packets to be played back at the same time and in the order of

the TS packets forming the base stream and the TS packets forming each of the at least one first to n-th extension stream streams.

Claim 33. (Currently Amended): An information processing apparatus comprising:
encoding means for encoding at least a base stream of an entire stream that may include the base stream and ~~first to n-th~~ at least one extension streams stream having extensibility for the base stream;

first adding means for adding a same first ID to the stream encoded by the encoding means among the base stream and the ~~first to n-th~~ at least one extension streams stream, the first ID identifying the entire stream;

second adding means for adding transport priority information to, among the base stream and the ~~first to n-th~~ at least one extension streams stream, the stream encoded by the encoding means, the transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension streams stream; and

a packetizing means for packetizing the base stream and the ~~first to n-th~~ at least one extension streams stream, to which the first ID and the transport priority information are added by the first adding means and the second adding means, into TS packets,

wherein the encoding means encodes the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 34. (Cancelled).

Claim 35. (Currently Amended): The information processing apparatus according to Claim 33, wherein

when any of synchronization units of the ~~first to n-th~~ at least one extension ~~streams~~ stream corresponding to synchronization units of the base stream are present, the encoding means encodes, among the ~~first to n-th~~ at least one extension ~~streams~~ stream, the extension stream having the present synchronization units of the base stream.

Claim 36. (Currently Amended): The information processing apparatus according to Claim 35, wherein

when any of the synchronization units of the ~~first to n-th~~ at least one extension ~~streams~~ stream corresponding to the synchronization units of the base stream are present, the encoding means encodes, among the ~~first to n-th~~ at least one extension ~~streams~~ stream, the extension stream having the present synchronization units and the base stream and does not encode the extension stream having none of the present synchronization units, thereby encoding the entire stream using variable bit rate.

Claim 37. (Currently Amended): An information processing method implemented using an information processing apparatus having at least encoding and packetizing parts. comprising:

an encoding step of encoding, using the information processing apparatus, at least a base stream of an entire stream that may include the base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream;

a first adding step of adding a same first ID to the stream encoded by the encoding step among the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, the first ID identifying the entire stream;

a second adding step of adding transport priority information to, among the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, the stream encoded by the encoding step, the transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream; and

a packetizing step of packetizing, using the information processing apparatus, the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, to which the first ID and the transport priority information are added by the first adding step and the second adding step, into TS packets,

wherein the encoding step encodes the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 38. (Currently Amended): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an encoding step of encoding at least a base stream of an entire stream that may include the base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream;

a first adding step of adding a same first ID to the stream encoded by the encoding step among the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, the first ID identifying the entire stream;

a second adding step of adding transport priority information to, among the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, the stream encoded by the

encoding step, the transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream; and

a packetizing step of packetizing the base stream and the ~~first to n-th~~ at least one extension ~~streams~~ stream, to which the first ID and the transport priority information are added by the first adding step and the second adding step, into TS packets,

wherein the encoding step encodes the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 39. (Currently Amended): An information processing apparatus comprising:
input means for inputting an entire stream that includes at least one of TS packets forming a base stream and TS packets forming each of ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream;

selecting means for selecting, from the entire stream, ~~processable~~ TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream, and a predetermined condition set in advance, the first ID and the transport priority information being stored in each of the TS packets input by the input means; and

decoding means for decoding the TS packets selected by the selecting means,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the

TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 40. (Currently Amended): The information processing apparatus according to Claim 39, wherein

the entire stream is input to the input means including the TS packets arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the ~~first to n-th~~ at least one extension streams stream.

Claim 41. (Currently Amended): The information processing apparatus according to Claim 39, wherein

the entire stream input to the input means at least includes an encoded base stream, and further includes the ~~first to n-th~~ at least one extension streams stream which correspond to synchronization units of the base stream and which are encoded using variable bit rate.

Claim 42. (Currently Amended): An information processing method implemented using an information processing apparatus having at least a decoding part, comprising:

an input step of inputting an entire stream that may include TS packets forming a base stream and TS packets forming each of ~~first to n-th~~ at least one extension streams stream having extensibility for the base stream;

a selecting step of selecting, from the entire stream, ~~processable~~ TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension streams stream, and a predetermined condition set in advance, the first ID and the transport

priority information being stored in each of the TS packets input by processing in the input step; and

a decoding step of decoding, using the information processing apparatus, the TS packets selected by processing in the selecting step,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 43. (Currently Amended): A non-transitory computer readable medium having stored thereon a program that when executed by the computer causes the computer to execute an information processing method comprising:

an input step of inputting an entire stream that may include TS packets forming a base stream and TS packets forming each of ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream;

a selecting step of selecting, from the entire stream, ~~processable~~ TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream, and a predetermined condition set in advance, the first ID and the transport priority information being stored in each of the TS packets input by processing in the input step; and

a decoding step of decoding the TS packets selected by processing in the selecting step,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 44. (Currently Amended): A non-transitory computer readable medium having stored thereon a data structure of an entire stream to be played back by a computer, wherein the entire stream includes at least one of a base stream and ~~first to n-th~~ at least one extension ~~streams~~ stream having extensibility for the base stream,

the entire stream includes:

TS packets forming the base stream; and

TS packets forming, when any of synchronization units of the ~~first to n-th~~ at least one extension ~~streams~~ stream corresponding to synchronization units of the base stream are present, among the ~~first to n-th~~ at least one extension ~~streams~~ stream, the extension stream having the present synchronization units; and

a header of each of the TS packets forming the base stream and the TS packets forming each of the ~~first to n-th~~ at least one extension ~~streams~~ stream includes:

a first ID used to identify the entire stream; and

transport priority information indicating priority and respectively distinguishing the base stream from the ~~first to n-th~~ at least one extension ~~streams~~ stream,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the

TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 45. (Currently Amended): The non-transitory computer readable medium according to claim 44, wherein

the TS packets forming the base stream and the TS packets forming each of the ~~first to n-th~~ at least one extension streams stream, which are included in the entire stream, are arranged in sequence of the TS packets to be played back at the same time and in the order of the TS packets forming the base stream and the TS packets forming each of the ~~first to n-th~~ at least one extension streams stream.

Claim 46. (Currently Amended): The non-transitory computer readable medium according to claim 44, wherein

the entire stream at least includes the base stream, and further includes the TS packets forming the ~~first to n-th~~ at least one extension streams stream corresponding to the synchronization units of the base stream, the number of the TS packets being variable.

Claims 47-60 (Cancelled).

Claim 61 (New): An information processing apparatus, comprising:

an encoding unit implemented by a central processing unit and configured to encode an input stream so as to include, among a base stream and at least one extension stream having extensibility for the base stream, at least the base stream and a first extension stream;

an adding unit configured to add transport priority information that indicates priority and respectively distinguishes the base stream from the at least one extension stream, which

are encoded by the encoding unit, to the base stream and the at least one extension stream;
and

a packetizing unit configured to packetize the base stream and the at least one extension stream, to which the transport priority information is added by the adding unit, into TS packets,

wherein the encoding unit is further configured to encode the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the input stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 62 (New): An information processing apparatus, comprising:

an input unit configured to input a stream including TS packets forming a base stream, TS packets forming at least one extension stream having extensibility for the base stream, each of the TS packets having transport priority information that indicates priority and respectively distinguishes the base stream from the at least one extension stream;

a determining unit configured to refer to the transport priority information stored in the TS packets input by the input unit and for determining the type of processable stream;

a selecting unit configured to select, from the stream, the TS packets having the transport priority information associated with the stream determined by the determining unit to be processable; and

a decoding unit implemented by a central processing unit and configured to decode the TS packets selected by the selecting unit,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the stream, are encoded so that the TS

packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 63 (New): An information processing apparatus, comprising:

an encoding unit implemented by a central processing unit and configured to encode at least a base stream of an entire stream that may include the base stream and at least one extension stream having extensibility for the base stream;

a first adding unit configured to add a same first ID to the stream encoded by the encoding unit among the base stream and the at least one extension stream, the first ID identifying the entire stream;

a second adding unit configured to add transport priority information to, among the base stream and the at least one extension stream, the stream encoded by the encoding unit, the transport priority information indicating priority and respectively distinguishing the base stream from the at least one extension stream; and

a packetizing unit configured to packetize the base stream and the at least one extension stream, to which the first ID and the transport priority information are added by the first adding unit and the second adding unit, into TS packets,

wherein the encoding unit is further configured to encode the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.

Claim 64 (New): An information processing apparatus comprising:

an input unit configured to input an entire stream that includes at least one of TS packets forming a base stream and TS packets forming each of at least one extension stream having extensibility for the base stream;

a selecting unit configured to select, from the entire stream, TS packets based on a first ID used to identify the entire stream, transport priority information indicating priority and respectively distinguishing the base stream from the at least one extension stream, and a predetermined condition set in advance, the first ID and the transport priority information being stored in each of the TS packets input by the input unit; and

a decoding unit implemented by a central processing unit and configured to decode the TS packets selected by the selecting unit,

wherein the TS packets forming the base stream and the TS packets forming the at least one extension stream, which are included in the entire stream, are encoded so that the TS packets, to be played back at the same time, are arranged in sequence in the order of the TS packets forming the base stream and the TS packets forming the at least one extension stream.